

## CLAIMS

1. A prosthetic arterial graft apparatus, comprising:
  - a tubular element having a first end and a second end exposing the inside volume of the tubular element, the first end and the second end for surgical coupling to an artery; and
    - an access valve coupled to the tubular element, allowing for insertion of fluid into the inside volume of the tubular element;
      - wherein it is determined whether the prosthetic arterial graft is hemostatic by insertion of fluid into the tubular element via the access valve and inspecting for leaking of the fluid at the coupling between the first end and the artery and the coupling between the second end and the artery.
2. The apparatus of claim 1, wherein the access valve allows for egress of debris from the inside volume of the tubular element.
3. The apparatus of claim 2, wherein the access valve allows for egress of gas from the inside volume of the tubular element.
4. The apparatus of claim 1, wherein the tubular element is a cylindrical shaped element constructed of any one of polytetrafluoroethylene and Dacron.
5. The apparatus of claim 1, further comprising a connector disposed on the access valve for coupling to a device for insertion of fluid into the tubular element.

6. A prosthetic arterial graft apparatus, comprising:

  - a tubular element having a first end and a second end exposing the inside volume of the tubular element, the first end and the second end for anastomotic coupling to an artery;
  - an enclosure coupled to a side of the tubular element, wherein an inside volume of the enclosure is continuous with the inside volume of the tubular element; and
  - an access valve coupled to the enclosure, allowing for insertion of fluid into the enclosure;

wherein it is determined whether the prosthetic arterial graft is hemostatic by insertion of fluid into the tubular element via the access valve and inspecting for leaking of the fluid at the anastomoses.
7. The apparatus of claim 6, wherein the access valve allows for egress of debris from the inside volume of the tubular element.
8. The apparatus of claim 7, wherein the access valve allows for egress of gas from the inside volume of the tubular element.
9. The apparatus of claim 6, wherein the tubular element is a cylindrical shaped element constructed of any one of polytetrafluoroethylene and Dacron.
10. The apparatus of claim 6, wherein the enclosure is a cylindrical shaped element perpendicularly disposed on a midsection of the side of the tubular element.

11. The apparatus of claim 6, further comprising a connector disposed on the access valve for coupling to a device for insertion of fluid into the tubular element.

12. A method of performing a prosthetic arterial graft surgery, comprising:
  - creating a first opening of an artery and a second opening of the artery;
  - clamping the first opening of the artery and the second opening of the artery to prevent bleeding;
  - surgically coupling a prosthetic graft to the first opening of the artery and the second opening of the artery, wherein the prosthetic graft comprises:
    - a tubular element having a first end and a second end exposing the inside volume of the tubular element, the first end surgically coupled to the first opening and the second end surgically coupled to the second opening;
    - an enclosure coupled to a side of the tubular element, wherein an inside volume of the enclosure is continuous with the inside volume of the tubular element; and
    - an access valve coupled to the enclosure, allowing for insertion of fluid into the enclosure;
  - inserting fluid into the tubular element via the access valve and inspecting for leaking of the fluid at the coupling of the first opening and the first end and the coupling of the second opening and the second end.

13. The method of claim 12, further comprising:
  - if leaking is detected upon inspection, surgically repairing the coupling that is leaking.
14. The method of claim 13, further comprising:

unclamping any one of the first opening and the second opening to allow flow of blood through the prosthetic graft; and  
allowing egress of debris from the access valve.

15. The method of claim 14, further comprising:

unclamping any one of the first opening and the second opening to allow flow of blood through the prosthetic graft; and  
allowing egress of air from the access valve.

16. The method of claim 12, wherein the step of creating a first opening of an artery and a second opening of the artery comprises any one of:

severing and bypassing the artery;  
severing and excising a portion of the artery; and  
excluding the artery.